



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,901	03/30/2004	Sridhar Sankaranarayanan	H0005782	2900

128 7590 05/27/2009  
HONEYWELL INTERNATIONAL INC.  
PATENT SERVICES  
101 COLUMBIA ROAD  
P O BOX 2245  
MORRISTOWN, NJ 07962-2245

EXAMINER
----------

ORTIZ RODRIGUEZ, CARLOS R

ART UNIT	PAPER NUMBER
----------	--------------

2123

MAIL DATE	DELIVERY MODE
-----------	---------------

05/27/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/708,901	<b>Applicant(s)</b> SANKARANARAYANAN, SRIDHAR	
	<b>Examiner</b> CARLOS ORTIZ RODRIGUEZ	<b>Art Unit</b> 2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-11,13-17,19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 1-4,6-11,13-17,19 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-4, 6-11, 13-17 and 19-20 are pending.
2. Claims 5, 12 and 18 are cancelled.

### ***Response to Arguments***

3. Applicant's arguments filed 03/09/09 have been fully considered. Please find new claim objections below. Accordingly, this action is made non-final.

### ***Allowable Subject Matter***

4. Claims 1-4, 6-11, 13-17 and 19-20 would be allowable if rewritten to overcome the objections to informalities set forth in this Office action.

5. The following is a statement of reasons for the indication of allowable subject matter:

While Leonard et al. (U.S. Patent No. 3,826,904) discloses a blender a plurality of outlets, wherein each of said plurality of outlets provides a corresponding one of said plurality of components according to a corresponding flow rate for blending by said blender, a plurality of source controllers, wherein each of said plurality of source controllers controls the flow rate of a corresponding one of said plurality of outlets, and a blend controller determining the flow rate for each of said plurality of source controllers, Kwak (U.S. Patent No. 6,866,830) discloses that plurality of target properties can be

Art Unit: 2123

attained by further blending a plurality of components including a first component from an intermediate blend point which would produce an aggregate volume of a product, and Navani et al. (U.S. Patent No. 7,448,046) discloses receiving data indicating whether a first component is available from start of blending, said data also indicating a time instance at which said first component is available.

None of these references taken either alone or in combination with the prior art of record disclose:

(Claim 1) "a method of blending including a determining step, wherein said determining comprises: computing using said digital processing system a plurality of ideal volumes corresponding to said plurality of components which would be blended if said first component were to be available during entire blend duration, wherein said plurality of ideal volumes includes a first ideal volume for said first component; assigning said first ideal volume to a temporary variable; searching whether one or more of said intermediate blend points are feasible with said temporary variable as volume for said first component; if one or more of said intermediate blend points are feasible, said controlling using one of said one or more intermediate blend points to control the flow rates of said plurality of components; and if any of said intermediate blend points is not feasible, decreasing said temporary variable by an amount and performing said searching",

(Claim 8) "a computer readable medium storing instructions for determining, wherein said determining comprises: computing a plurality of ideal volumes corresponding to said plurality of components which would be blended if said first

Art Unit: 2123

component were to be available during entire blend duration, wherein said plurality of ideal volumes includes a first ideal volume for said first component; setting a temporary variable equal to said first ideal volume; finding whether one or more of said intermediate blend points are possible with said temporary variable as volume for said first component; if one or more of said intermediate blend points are possible, using one of said one or more intermediate blend points to control the flow rates of said plurality of components; and if one or more of said intermediate blend points are not possible, decreasing said temporary variable by an amount and performing said finding”, and

(Claim 14) “ a manufacturing plant, including a blend controller configured to determine the flow rate for each of a plurality of source controllers and configured to compute a plurality of ideal volumes corresponding to said plurality of components which would be blended if said first component were to be available during entire blend duration, wherein said plurality of ideal volumes includes a first ideal volume for said first component; assign said first ideal volume to a temporary variable; search whether one or more of said intermediate blend points are feasible with said temporary variable as volume for said first component; if one or more of said intermediate blend points are feasible, said control using one of said one or more intermediate blend points to control the flow rates of said plurality of components; and if any of said intermediate blend points is not feasible, decreasing said temporary variable by an amount and performing said search”,

in combination with the remaining elements and features of the claimed invention. It is for these reasons that the applicant's invention defines over the prior art of record.

### ***Claim Objections***

6. (Claim 1 Line 3, Claim 1 Line 16-17, Claim 8 Lines 29-30, Claim 14 Line 36, Claim 20 Line 7) objected to because the limitation "from start of blending" would be better if written as "from said start of said blending" in order to maintain consistency throughout the claims. See for example (Claim 1 Line 19) (Claim 8 Line 7) (Claim 14 Line 7) where the term "start of said blending" is previously mentioned. Appropriate correction is required.
7. (Claim 1 Lines 40-41) objected to because the term "feasible, said controlling" would be better if written as "feasible, performing said controlling". Appropriate correction is required.
8. (Claim 4 Line 2) objected to because the limitation "for blending" would be better if written as "for said blending" in order to maintain consistency throughout the claims. See for example (Claim 1 Line 9) where it previously mentions the term "blending". Appropriate correction is required.
9. (Claim 17 Line 2) objected to because the limitation "a corresponding plurality of outlets" would be better if written as "a corresponding outlet of said plurality of outlets" in order to maintain consistency throughout the claims. See (Claim 14 Line 11) where it previously mentions the term "a plurality of outlets". Appropriate correction is required.

Art Unit: 2123

10. (Claim 17 Line 3-4) objected to because the limitation “a corresponding one of said plurality of outlets” would be better if written as “the corresponding outlet of said plurality of outlets” in order to maintain consistency throughout the claims. Appropriate correction is required. *Please note that this correction is subject to the objection set forth in the above Item 9 of this office action.*

11. (Claim 17 Line 3) objected to because the limitation “a plurality of source controllers controls” would be better if written as “said plurality of source controllers controls” in order to maintain consistency throughout the claims. See Claim 14 Line 14 where it previously mentions the term “a plurality of source controllers”. Appropriate correction is required.

12. Regarding (Claim 14 Line 17, Claim 14 Line 37 and Claim 17 Lines 4-5), please note that the term “operable to” is a non-positive limitation and would be better if written as “configured to” in order to positively describe the blend controller by what it is and not by its functions.

13. Claim 19 objected to because in (Claim 19 Line 2) the limitation “at start of said blending” would be better if written as “at said start of said blending” and in (Claim 19 Line 8) the limitation “from the start of said blending” would be better if written as “from said start of said blending”, in order to maintain consistency throughout the claims. See for example (Claim 1 Line 19) where the term “start of said blending” is previously mentioned. Appropriate correction is required.

***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Ortiz-Rodriguez whose telephone number is 571-272-3766. The examiner can normally be reached on Mon-Fri 10:00 am- 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Carlos Ortiz-Rodriguez  
Patent Examiner  
Art Unit 2123

May 26, 2009

/Kideest Bahta/  
Primary Examiner, Art Unit 2123